

**LUNENBURG DPW BUILDING COMMITTEE
TOWN OF LUNENBURG**



David MacDonald, Chair
Joanna Bilotta, Vice-Chair
Jay Simeone, Clk.
James Breault, Mbr.
Janice Carrier, Mbr.
Steve deBettencourt, Mbr.
Leigh Mezzetti, Mbr.

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FEB 01 2011

**LUNENBURG TOWN
CLERK OFFICE**

Minutes

**January 21, 2011
Ritter Building Lower Conference Room
960 Massachusetts Ave
Lunenburg, Ma. 01462**

Meeting Posted: Yes
Meeting Call to order at 4:00

Roll Call: Present: Dave MacDonald, Jay Simeone, James Breault, Jan Carrier, Steve deBettencourt. Leigh Mezzetti

Absent: Joanna Bilotta

Guest: Gregg Yanchenko of HKA Architects, Jack Rodriquez – DPW Director
Dave Mathews - Selectmen

Motion to approve minutes of 11-19-10, 12-6-10, as written. Approved.

GENERAL DISCUSSION:

Gregg submitted his HKA minutes from Dec. 6, 2010.

Septic System: bid out new septic system. Need to have discussion with Board of Health.

Soil conditions: DPW to get sample of sand from landfill site to see if may be compatible for use in the septic field.

Well water: Flow test of the well needs to be done. Test results need to be submitted to FD.

Gregg (HKA) to sign letter to FD.

Geotech soil borings to be done by HKA.

Review of plans:

The committee reviewed the conceptual building plans. Gregg needed clarification on some details to finalize the plan specs.

Architectural issues:

Roof on existing garage. Gregg submitted a proposal from Northeast Roof Consultants, LLC. The proposal included two cost estimates. First estimate to repair the existing roof for about \$10K. Second estimate to replace the roof at a cost of about \$40K.

Roof replacement is listed on the bid specs as an Alternate.

Gregg needed to clarify pedestrian door locations for the new addition and Maintenance garage.

Maintenance garage: Jim B and Jack R are recommending keeping the existing side garage door, eliminating the proposed tool room and mechanics office in the rear of the garage to be able to park two loaders in there. Putting a smaller office in the first bay and the vehicle lift in the second bay.

Administrative issues:

Proposed front end documents recommended to be reviewed by Town counsel, Town Manager, and our procurement office before going out to bid.

DPW Plant Generator is maintained by Ingersol Rand

Clarify electrical locations and needs for heavy load equipment like the welder and air compressor.

Safety equipment: The Chairmen wanted to be sure all the safety equipment is plotted on the building plan. Fire extinguishers, eye wash station, medical cabinet, fire cabinets etc.

Detail locations for data/phone and electric plugs.

Detail locations for office equipment: fax, copier, computers, file cabinets

Gregg recommended a company he has used for reconditioned office furnishings: desks, chairs, file cabinets, conference table, etc.

Recommendation for building signage to be Aluminum

Changed office lighting from 2 x 2 lamps, to 4 x 2.

Structural review of the mezzanine and garage addition.

Plumbing: Floor drains in wash bay: question on the size of containment tank. Does waste water drain off? Or go into containment tank? Oil water separator.

Heating system in garages: ceiling mount gas units in new garage addition. Inferred units in existing garage.

Jack, Jim, Leigh to review plans for location of electrical/data/phone outlets and office equipment, etc.

Next meeting will be the final review of the plans before being sent out for bid.

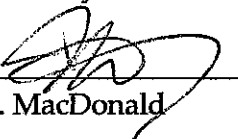
Next Meeting Date: February 3, 2011 @ 5:00 pm

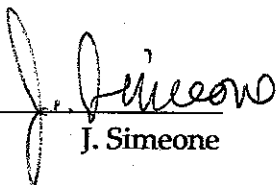
Motion to adjourn at 6:05 pm.

Respectfully Submitted by:

Jay Simeone

Secretary


D. MacDonald


J. Simeone

1-21-11

MEETING MINUTES
DPW ADDITION/RENOVATIONS
Town of Lunenburg
Ritter Memorial Building

960 Massachusetts Avenue, Lunenburg, MA

SCHEMATIC DESIGN REVIEW MEETING
6 December 2010 at 4:30 p.m.

Attendees: Dave MacDonald – Town of Lunenburg (TOWN)
Joanna Bilotta – TOWN
Kerry Speidel – TOWN
Jan Carrier – TOWN
Steve DeBettencourt – TOWN
Jay Simeone - TOWN
Jim Beault – TOWN DPW
Leigh Mezzetti – TOWN DPW
Gregg Yanchenko - HELENE-KARL Architects (HKA)
cc: Laura Williams - TOWN
Kevin Seaman – Seaman Engineering Corp. (SEC)
Chris Robinson – SEC
John Murphy – John J. Murphy Jr. Electrical Construction and Engineering, Inc. (JME)
Bob Lie – Lin Associates, Inc. (LIN)
Bill Murray – PLACES Site Consultants, Inc. (PSCL)
Jack Rodriquez – TOWN DPW

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**LUNENBURG TOWN
CLERK OFFICE**

Purpose:

To review the schematic design submission and scope.

ACTION

COMMENTS

HKA distributed copies of the schematic design package to the TOWN. The submission included drawings A-1 to A-4 dated 12/1/10, rendering images 1 and 2 with the revised roof line and conceptual cost estimate dated 12/6/10. Issues discussed and the TOWN's comments were as follows:

Design Issues:

- HKA/Town
1. HKA opened the discussion by reviewing the scope of work discussed at the meeting on 11/19/10.
 - a. HKA confirmed that the construction budget is \$990K. Note: The TOWN appropriation for the Project is for \$1.1M.
 - b. The TOWN will review the sprinkler system waiver with the Town's Fire Department due to the limited water capacity at the site. The TOWN will coordinate a flow test on the existing well. The TOWN indicated that HKA may need to prepare a letter regarding the water capacity.
- All
2. Subsequent to the general discussion, HKA presented the schematic design submission. The Town requested the following design modifications.
 - a. Civil – None.
 - b. Structural – In lieu of a flat roof on the new addition, the design is to have a typical pre-engineered sloped roof. The mezzanine and wash bay additions are to be eliminated since it was not in the original scope presented to the Town.

ACTION

COMMENTS

- c. Architectural – The Town confirmed that the vehicle bay size shall be 18'-0" in lieu of 17'-0". Town directed HKA to eliminate the replacement of the windows above the existing overhead doors. The Town will confirm the locations of the overhead and personnel doors.
- d. Mechanical and Electrical – The Town indicated that the IT equipment will be supplied under a separate contract. The building design should allow for the conduits, cables and jacks.

HKA

- 3. In addition to the design modifications above in item #2, the Town and HKA discussed the following alternates.
 - a. Alternate deduct #1 – Mechanic's bay walls and layout.
 - b. Alternate deduct #2 – Entry canopy.
 - c. Alternate add #3 – Replace the existing roof.

Town

- 4. HKA request that the Town forward and special equipment power requirements. If possible, HKA requested that the Town also forward the equipment specifications/cuts.

Administrative Issues:

HKA

- 5. HKA will coordinate a date and time to dig test pits for the septic system.

Town/HKA

- 6. The Town and HKA need to coordinate the geotechnical test for the building structures.

All

- 7. The next submission and meeting has tentatively been scheduled for **TBD**.

The information, herein, reflects HKA's understanding of decisions reached at the meeting noted. Please contact our office within seven calendar days if you have any questions or are not in agreement with the minutes.

Northeast Roof Consultants, LLC

Registered Roof Consultants

December 27, 2010

Mr. Greg Yanchenko, AIA
Vice President
Helene Karl Architects, Inc.
61 Skyfields Drive
Groton, MA 01450

Re: Preliminary Design Report
Roof Renovations @
Lunenburg DPW Building
Lunenburg, Massachusetts

Greg:

Following is some preliminary information concerning the roof on the Lunenburg DPW Building, which we visited on Wednesday, December 22, 2010. The purpose of the visit was to survey the roof and offer our recommendations for required repairs or replacement. The survey consisted of a visual inspection of the existing roofing and flashings in order to determine the overall condition of the roofing system. Test cuts were taken in two separate locations in order to determine the type and size of the underlying roofing components. According to on site personnel, the existing roof is original and over 20 years old. As the adjacent sloped EPDM roof will be removed as part of the proposed design, no test cuts or measurements of the roof were taken.

The main roof is a one level rectangular shaped structure measuring approximately 107' x 63'-6". The total area of the roof is approximately 6,800 square feet. The roof slopes from front to back where four 24" long roof scuppers are located. The existing slope to the back edge of the roof appears adequate. Due to the presence of stone ballast we could not determine whether standing water was an issue along the rear perimeter. The roof top penetrations/ units consist of vent pipes (3), flue stacks (5) and roof ventilators (3).

Existing Roofing System – Test cuts revealed that the components of existing roofing system consist of the following: 1-1/2" +/- diameter stone ballast over a loose laid .045" unreinforced EPDM membrane applied over a layer of 2" thick, loose laid rigid foam insulation board over a 1-1/2" deep, steel deck. Eighteen inch wide tapered edge was installed along the roof perimeter to pitch water away from the edge. The roof components at both test cut locations were found to be dry. The structural steel decking was found to be in good condition at the test cut locations. A visual survey from the underside found only minor surface rust on sections of the steel decking.

No test samples were taken due to the type of roof materials within the roofing system.

Roof Condition – Due to the presence of the stone ballast, an overall inspection of the roofing membrane was not possible. However an inspection of edge and penetration flashing revealed that the membrane used to flash the curbs, perimeter and penetrations was showing signs of aging and deterioration. Two of the most recent leaks originated around rooftop penetrations. A test cut at one of the suspect curbs revealed a hole in the uncured EPDM flashing membrane at the base of the curb. The condition of the exposed flashing is typical for roofs of the type and vintage. The hole was repaired when the test cut was patched.

Conclusions/Recommendations – With repairs to the existing flashing membrane at penetrations, curbs and perimeters, overlaying of all field seams and general roof maintenance, the useful service life of the roof could be extended for several additional years. However, any roof repairs will only delay the need for more substantial roof renovations in the near future.

Based on our discussion, the roof work is not a top priority at this time. Therefore we recommend including several alternates into the Bid package and let the Owner decide whether the roof work can be undertaken during the building renovation work. The alternates are as follows:

Alternate No. 1 – Move stone ballast to expose existing seams in the field of the roof and also all flashing membrane at penetrations, curbs and roof perimeters. Clean all adjacent EPDM membrane in accordance with the EPDM manufacturer's requirements, and reflash all areas with new minimum .060" thick EPDM membrane. Field seams shall be cleaned and overlayed with a minimum 5" wide seam cover tape. All areas shall be recovered with stone ballast to prevent wind uplift issues on the roof. Estimated Cost for Alternate No. 1 - \$9,700.

Alternate No. 2 – Remove existing stone ballast from the roof and dispose of offsite. Cut existing loose laid EPDM membrane into sections and remove from site. Over existing 2" thick rigid insulation (to remain in place), secure a ½" thick, 100 psi polyisocyanurate cover board over the entire roof. Install wood blocking at perimeter to match height of new cover board. Install new mechanically attached .060" reinforced EPDM membrane over cover board and secure at all field seams. Hook new aluminum edge metal to existing gravel stop and secure in the flange at 4" on center. Reflash all penetrations, curbs and roof perimeters. Provide manufacturer's 20 year system warranty to the Owner. Estimated Cost for Alternate No. 2 - \$45,000.

I hope this report provides you with the information you require. If you have any questions, comments or concerns feel free to call.

Sincerely,

John R. Skypeck, RRC
President
Northeast Roof Consultants, LLC

95% SUBMISISION COST ESTIMATE

ITEM	UNIT	QUAN.	MATE RIALS		LABOR				OTHER COST	LINE TOTAL
			UNIT COST	TOTAL COST	MANHOUR UNIT	TOTAL MANHOURS	WAGE RATE	TOTAL COST		
DIVISION 1 - General										
Supervision/General Conditions	WK	16		\$0	40.00	640	\$60.00	\$38,400		\$38,400
Project Management	WK	16	\$75.00	\$1,200	8.00	128	\$65.00	\$8,320		\$9,520
Temporary Facilities (1 trailer)	WK	16	\$400.00	\$6,400					\$1,500	\$7,900
Protection	WK	16	\$25.00	\$400	8.00	128	\$51.59	\$6,604	\$2,500	\$9,504
Demolition - General	LS	1	\$1,000.00	\$1,000	48.00	48	\$51.59	\$2,476	\$7,500	\$10,976
Dumpsters	EA	6	\$625.00	\$3,750	0.00	0	\$0.00	\$0		\$3,750
Material Handling/Equipment	WK	16	\$150.00	\$2,400	8.00	128	\$51.59	\$6,604		\$9,004
Clean-up	WK	16	\$25.00	\$400	8.00	128	\$51.59	\$6,604		\$7,004
Project Closeout	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$1,500	\$1,500
									Subtotal	\$97,557
DIVISION 2 - Site Work										
Hay Bale/Silt Fence	LF	500	\$1.00	\$500	0.03	13	\$51.59	\$645		\$1,145
Demolition/Excavation	CY	540	\$0.00	\$0	0.25	135	\$82.12	\$11,086	\$2,500	\$13,586
Septic System- Basic	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$22,000	\$22,000
Septic System - Pump Chamber	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$20,000	\$20,000
Oil Water Separator Tank	EA	1	\$5,500.00	\$5,500	40.00	40	\$82.12	\$3,285	\$500	\$9,285
2" Water Service Pipe	LF	100	\$4.25	\$425	0.30	30	\$71.41	\$2,142		\$2,567
Backfill	CY	300	\$4.65	\$1,395	0.25	75	\$82.12	\$6,159		\$7,554
Gravel	TON	275	\$9.00	\$2,475	0.10	28	\$82.12	\$2,258		\$4,733
Loam and Seed	SF	0	\$0.50	\$0	0.01	0	\$47.45	\$0		\$0
Miscellaneous (signs, etc.)	LS	1	\$500.00	\$500	16.00	16	\$67.56	\$1,081		\$1,581
									Subtotal	\$82,451
DIVISION 3 - Concrete										
Concrete - Foundations	CY	100	\$100.00	\$10,000	0.75	75	\$81.93	\$6,145		\$16,145
Concrete - Slabs	CY	150	\$100.00	\$15,000	1.00	150	\$81.93	\$12,290		\$27,290
Concrete Formwork	SF	4200	\$0.95	\$3,990	0.05	210	\$81.93	\$17,205		\$21,195
Reinforcement and Wire	TON	6	\$1,000.00	\$6,000	16.00	96	\$81.93	\$7,865		\$13,865
Miscellaneous	LS	1	\$1,200.00	\$1,200	120.00	120	\$81.93	\$9,832		\$11,032
									Subtotal	\$89,526
DIVISION 4 - Masonry										
CMU Walls	SF	1600	\$3.50	\$5,600	0.20	320	\$94.69	\$30,301		\$35,901
Miscellaneous	LS	1	\$500.00	\$500	24.00	24	\$94.69	\$2,273		\$2,773
									Subtotal	\$38,673
DIVISION 5 - Metals										
Bollards	EA	12	\$200.00	\$2,400	2.00	24	\$71.24	\$1,710		\$4,110
Roof Seismic Upgrades	EA	15	\$100.00	\$1,500	2.50	38	\$94.69	\$3,551	\$500	\$5,551
Steel Decking	SF	1800	\$3.50	\$6,300	0.05	81	\$74.28	\$6,017		\$12,317
Mezzanine Stairs	EA	1	\$3,500.00	\$3,500	16.00	16	\$94.69	\$1,515		\$5,015
Miscellaneous Metal	LS	1	\$600.00	\$600	16.00	16	\$94.69	\$1,515		\$2,115
									Subtotal	\$29,107
DIVISION 6 - Wood and Plastic										
Plywood Back-up	SF	216	\$1.50	\$324	0.03	6	\$71.24	\$462		\$786
Counters / Cabinets	LF	10	\$150.00	\$1,500	1.50	15	\$71.24	\$1,069		\$2,569
Roof Blocking 2X	LF	240	\$1.00	\$240	0.03	6	\$71.24	\$427		\$667
Miscellaneous - blocking, etc.	LS	1	\$250.00	\$250	16.00	16	\$71.24	\$1,140		\$1,390
									Subtotal	\$5,412
DIVISION 7 - Thermal/Moisture										
Perimeter Insulation	SF	1600	\$1.15	\$1,840	0.04	64	\$71.24	\$4,559		\$6,399
EPDM Roofing	SF	1700	\$6.50	\$11,050	0.02	34	\$83.34	\$2,834		\$13,884
Roof Insulation	SF	1700	\$1.15	\$1,955	0.02	34	\$83.34	\$2,834		\$4,789
Flashing - Edge	LF	200	\$8.00	\$1,600	0.10	20	\$83.34	\$1,667		\$3,267
Vapor Barrier	SF	1600	\$0.05	\$80	0.01	8	\$62.10	\$497		\$577
Firestopping	LS	1	\$150.00	\$150	12.00	12	\$62.10	\$745		\$895
Sealant and Caulk	LS	1	\$80.00	\$80	24.00	24	\$62.10	\$1,490		\$1,570
									Subtotal	\$31,381

ITEM	UNIT	QUAN.	MATE RIALS		LABOR			TOTAL COST	OTHER COST	LINE TOTAL
			UNIT COST	TOTAL COST	MANHOUR UNIT	TOTAL MANHOURS	WAGE RATE			
DIVISION 8 - Doors/Windows										
Metal Door with Vision Panel	EA	9	\$325.00	\$2,925	4.00	36	\$71.24	\$2,565		\$5,490
Interior Wood Doors	EA	9	\$235.00	\$2,115	2.00	18	\$71.24	\$1,282		\$3,397
Pass Window	EA	2	\$400.00	\$800	4.00	8	\$71.24	\$570		\$1,370
Metal Frames	EA	18	\$195.00	\$3,510	2.00	36	\$71.24	\$2,565		\$6,075
Windows - Addition	EA	6	\$375.00	\$2,250	3.00	18	\$71.24	\$1,282		\$3,532
Windows - Existing	EA	0	\$375.00	\$0	4.00	0	\$71.24	\$0		\$0
Overhead Doors w/ Motors	EA	12	\$4,000.00	\$48,000	16.00	192	\$71.24	\$13,678		\$61,678
Finish Hardware	EA	18	\$350.00	\$6,300	3.00	54	\$71.24	\$3,847		\$10,147
									Subtotal	\$91,689
DIVISION 9 - Finishes										
Painting - Interior	SF	8000	\$0.25	\$2,000	0.01	80	\$79.29	\$6,343		\$8,343
VCT Floor	SF	2400	\$1.95	\$4,680	0.02	48	\$90.63	\$4,350		\$9,030
Vinyl Base	LF	600	\$1.00	\$600	0.03	18	\$90.63	\$1,631		\$2,231
Gypsum and Framing	SF	6400	\$3.95	\$25,280	0.02	128	\$85.46	\$10,939		\$36,219
Acoustical Ceilings	SF	2400	\$1.50	\$3,600	0.01	29	\$85.46	\$2,461		\$6,061
Ceramic Tile	SF	750	\$4.25	\$3,188	0.07	53	\$90.77	\$4,765		\$7,953
									Subtotal	\$69,838
DIVISION 10 - Specialties										
Logo Signage	EA	1	\$1,500.00	\$1,500	8.00	8	\$64.48	\$516	\$500	\$2,516
Fire Extinguisher	EA	5	\$125.00	\$625	1.00	5	\$64.48	\$322		\$947
Appliances	EA	2	\$475.00	\$950	2.00	1	\$64.48	\$64		\$1,014
Lockers / Bench	EA	12	\$200.00	\$2,400	1.50	18	\$81.93	\$1,475		\$3,875
Toilet Partitions	EA	1	\$850.00	\$850	4.00	4	\$71.24	\$285		\$1,135
Bathroom Accessories	EA	3	\$275.00	\$825	4.00	12	\$71.24	\$855		\$1,680
									Subtotal	\$11,167
DIVISION 11 - 12 Equipment and Furnishings										
NOT USED										
DIVISION 13 - Special Construction										
Pre-Engineered Building	LS	1	\$130,000.00	\$105,000	0.00	0	\$0.00	\$0		\$105,000
Building Erection	LS	1	\$120,000.00	\$95,000	0.00	0	\$0.00	\$0		\$95,000
									Subtotal	\$200,000
DIVISION 14 - Conveying Systems										
NOT USED										
DIVISION 15 - Plumbing										
Water Closet (toilet)	EA	2	\$553.00	\$1,106	4.00	8	\$105.96	\$848		\$1,954
Water Closet Rough-In	EA	2	\$185.00	\$370	8.00	16	\$105.96	\$1,695		\$2,065
Lavatory and Faucet-Wall	EA	3	\$375.00	\$1,125	4.00	12	\$105.96	\$1,272		\$2,397
Lavatory Rough-In	EA	3	\$147.00	\$441	8.00	24	\$105.96	\$2,543		\$2,984
Urinal	EA	1	\$195.00	\$195	2.00	2	\$105.96	\$212		\$407
Urinal Rough-In	EA	1	\$65.00	\$65	4.00	4	\$105.96	\$424		\$489
Janitors Sink	EA	1	\$125.00	\$125	2.00	2	\$105.96	\$212		\$337
Janitors Sink Rough-In	EA	1	\$65.00	\$65	4.00	4	\$105.96	\$424		\$489
Shower and Faucet-Wall	EA	1	\$795.00	\$795	4.00	4	\$105.96	\$424		\$1,219
Shower Rough-In	EA	1	\$200.00	\$200	10.00	10	\$105.96	\$1,060		\$1,260
1/2" Type "L" Copper & Insul.	LF	200	\$2.10	\$420	0.20	40	\$105.96	\$4,238		\$4,658
3/4" Type "L" Copper & Insul.	LF	300	\$2.75	\$825	0.20	60	\$105.96	\$6,358		\$7,183
1" Type "L" Copper & Insul.	LF	20	\$3.48	\$70	0.40	8	\$105.96	\$848		\$917
1 1/4" Type "L" Copper & Insul.	LF	10	\$4.22	\$42	0.80	8	\$105.96	\$848		\$890
1 1/2" Type "L" Copper & Insul.	LF	10	\$5.11	\$51	0.80	8	\$105.96	\$848		\$899
2" Type "L" Copper & Insul.	LF	20	\$7.20	\$144	0.40	8	\$105.96	\$848		\$992
Emergency Eye Wash	EA	1	\$550.00	\$550	12.00	12	\$105.96	\$1,272		\$1,822
Hose Bibs	EA	5	\$50.00	\$250	1.00	5	\$105.96	\$530		\$780
Hose Bib Rough-In	EA	5	\$65.00	\$325	2.00	10	\$105.96	\$1,060		\$1,385
Water Fountain	EA	1	\$350.00	\$350	8.00	8	\$105.96	\$848		\$1,198
Miscellaneous Valves	EA	50	\$20.00	\$1,000	0.32	16	\$105.96	\$1,695		\$2,695
Backflow Preventer	EA	1	\$1,000.00	\$1,000	8.00	8	\$105.96	\$848		\$1,848
Sanitary & Vent Piping	LF	400	\$10.63	\$4,252	0.10	40	\$105.96	\$4,238		\$8,490
Water Heater	EA	1	\$1,500.00	\$1,500	32.00	32	\$105.96	\$3,391		\$4,891
Floor Drains (Trench)	LF	50	\$50.00	\$2,500	1.00	50	\$105.96	\$5,298		\$7,798
Compressed Air	LS	1	\$0.00	\$0	0.00	0	\$105.96	\$0	\$5,500	\$5,500
Miscellaneous	LS	1	\$300.00	\$300	8.00	8	\$88.61	\$709		\$1,009
									Subtotal	\$66,553

95% SUBMISISION COST ESTIMATE

ITEM	UNIT	QUAN.	MATE RIALS		LABOR				OTHER COST	LINE TOTAL
			UNIT COST	TOTAL COST	MANHOUR UNIT	TOTAL MANHOURS	WAGE RATE	TOTAL COST		
DIVISION 15 - Fire Protection										
NOT USED										
DIVISION 15 - Mechanical										
Unit Heaters - Materials	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$12,000	\$12,000
Unit Heaters - Labor	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$7,500	\$7,500
Ductwork	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$12,000	\$12,000
CO Detection System	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$8,500	\$8,500
Furnace, Cooling, Condensing	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$12,000	\$12,000
Garage Exhaust Fans / Louvers	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$15,000	\$15,000
Radiant Heaters	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$5,000	\$5,000
Recessed Cabinet Heaters	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$2,000	\$2,000
Air Balancing	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$2,000	\$2,000
Miscellaneous	LS	1	\$0.00	\$0	0.00	0	\$0.00	\$0	\$2,000	\$2,000
									Subtotal	\$78,000
DIVISION 16 - Electrical										
Service	LS	1	\$5,000.00	\$5,000	48.00	48	\$104.42	\$5,012		\$10,012
Connections to Mechanical	EA	18	\$150.00	\$2,700	2.00	36	\$104.42	\$3,759		\$6,459
Fire Alarm System	LS	1	\$5,000.00	\$5,000	64.00	64	\$104.42	\$6,683		\$11,683
Light Fixtures	EA	60	\$200.00	\$12,000	1.50	90	\$104.42	\$9,398		\$21,398
Receptacles	EA	50	\$75.00	\$3,750	1.50	75	\$104.42	\$7,832		\$11,582
Tele/Data Empty Conduit	LS	1	\$1,000.00	\$1,000	40.00	40	\$104.42	\$4,177		\$5,177
Emergency Generator Hook-up	EA	1	\$0.00	\$0	0.00	0	\$104.42	\$0	\$3,500	\$3,500
Testing	LS	1	\$0.00	\$0	40.00	40	\$104.42	\$4,177		\$4,177
Commissioning	LS	1	\$0.00	\$0	40.00	40	\$104.42	\$4,177		\$4,177
									Subtotal	\$78,164
GRAND SUBTOTAL										\$969,518
OVERHEAD (8%)										\$77,561
SUBTOTAL										\$1,047,080
PROFIT (3%)										\$31,412
Building Permit (\$10/1000)										\$0
Bond (1.2%)										\$12,565
GRAND TOTAL										\$1,091,057
ALTERNATES ADDS:										
Replace Existing Roof	SF	6000	\$5.50	\$33,000	0.03	180	\$83.34	\$15,001		\$48,001
ALTERNATES DEDUCTS:										
CMU Interior Walls - Mechanics	SF	800	\$3.50	\$2,800	0.20	160	\$94.69	\$15,150		\$17,950
Metal Door - Mechanics	EA	5	\$325.00	\$1,625	4.00	20	\$71.24	\$1,425		\$3,050
Metal Frames - Mechanics	EA	3	\$195.00	\$585	2.00	6	\$71.24	\$427		\$1,012
Painting - Interior Mechanics	SF	2200	\$0.25	\$550	0.01	22	\$79.29	\$1,744		\$2,294
Gypsum and Framing - Mechanics	SF	400	\$4.95	\$1,980	0.03	12	\$85.46	\$1,026		\$3,006
Miscellaneous Painting - exterior	SF	4000	\$0.30	\$1,200	0.03	120	\$79.29	\$9,515	\$1,000	\$11,715
Entry Canopy	LS	1	\$7,500.00	\$7,500	0.00	0	\$0.00	\$0		\$7,500
Tele/Data wiring & Equipment								\$0		\$0
										\$46,527
GRAND SUBTOTAL										\$46,527
OVERHEAD (8%)										\$3,722
SUBTOTAL										\$50,250
PROFIT (3%)										\$1,507
Building Permit (\$10/1000)										\$0
Bond (1.2%)										\$603
GRAND TOTAL										\$52,360